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Examining the Relationship Between Personality Traits and Sport Engagement Levels in Active Athletes

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ABSTRACT

Purpose: The aim of this study was to examine the relationship between personality traits and sport engagement levels of active athletes and to evaluate this relationship in terms of different variables.

Method: A total of 305 licensed athletes who were students at the Faculty of Sport Sciences, Balıkesir University, and actively participating in sports voluntarily participated in the study, including 121 females (39.7%) and 184 males (60.3%). The "Personal Information Form", "Sport Engagement Scale", and "Big Five Personality Scale" were used as data collection tools. Pearson correlation analysis was conducted to examine the relationship between the two scales showing parametric distribution, and regression analysis was performed to determine the predictive effects of the significant relationships.

Results: According to the results of the correlation analysis, weak but significant positive relationships were found between sports engagement and extraversion, conscientiousness, agreeableness, and openness to experience ($p<0.05$), whereas no significant relationship was found between neuroticism and sports engagement ($p>0.05$). Regression analysis revealed that personality traits explained 7% of the variance in sports engagement. When the sub-dimensions were examined, conscientiousness and agreeableness were found to be significant and positive predictors of sports engagement ($p<0.05$), whereas extraversion and openness to experience did not have a significant effect on sports engagement ($p>0.05$).

Conclusion: In conclusion, personality traits had a limited but significant effect on sports engagement, and conscientiousness and agreeableness appeared to be more influential in explaining sports engagement levels.

Keywords: Sport, Engagement, Personality Traits, Sports Engagement, Active Athlete

ÖZET

Aktif Sporcuların Kişilik Özellikleri ile Spora Bağlılık Düzeyleri Arasındaki İlişkinin İncelenmesi

Amaç: Bu araştırmanın amacı, aktif olarak spor yapan sporcuların kişilik özellikleri ile spora bağlılık düzeyleri arasındaki ilişkiyi incelemek ve farklı değişkenler doğrultusunda bu ilişkiyi değerlendirmektir.

Yöntem: Araştırmaya 121 kadın (%39,7), 184 erkek (%60,3) olmak üzere aktif olarak spor yapan toplam 305 sporcu gönüllü olarak katılmıştır. Araştırmada veri toplama aracı olarak "Kişisel Bilgi Formu", "Spora Bağlılık Ölçeği" ve "Beş Faktör Kişilik Ölçeği" kullanılmıştır. Parametrik dağılım sergileyen iki ölçek arasındaki ilişkiyi incelemek amacıyla Pearson korelasyon analizi ve anlamlı ilişkilerin birbirine olan etkisini belirlemek amacıyla regresyon analizi uygulanmıştır.

Bulgular: Korelasyon analizi sonucunda dışadönüklük, öz denetimlilik, yumuşak başlılık ve deneyime açıklık ile spora bağlılık arasında pozitif yönde ve düşük düzeyde anlamlı ilişkiler

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tespit edilirken (p<0,05), nörotiklik ile spora bağlılık arasında anlamlı bir ilişki saptanmamıştır (p>0,05). Regresyon analizi sonuçlarına göre kişilik özellikleri spora bağlılıktaki varyansın %7'sini açıklamaktadır. Alt boyutlar incelendiğinde öz denetimlilik ve yumuşak başlılık değişkenlerinin spora bağlılığın anlamlı ve pozitif yordayıcıları olduğu belirlenirken (p<0,05),
dışadönüklük ve deneyime açıklık değişkenlerinin spora bağlılık üzerinde anlamlı bir etkisinin olmadığı belirlenmiştir (p>0,05).
Sonuç: Sonuç olarak, kişilik özelliklerinin spora bağlılık üzerinde sınırlı ancak anlamlı bir etkiye sahip olduğu; özellikle öz denetimlilik ve yumuşak başlılık özelliklerinin spora bağlılık düzeyinin açıklanmasında daha belirleyici olduğu belirlenmiştir.
Anahtar Kelimeler: Spor, Bağlılık, Kişilik Özellikleri, Spora Bağlılık, Aktif Sporcu

INTRODUCTION

Sport is a social phenomenon that contributes to social integration, modernization, recognition, and development by improving social relationships while also promoting healthy lifestyles for individuals (Yetim, 2000). Today, individuals' tendency to participate in sports varies depending on their social lives and personal interests. Interest, curiosity, and the ability to engage in a preferred sport are considered among the most important factors influencing sports participation (Tükenmez, 2009).

Since motivational stimuli do not produce the same effect on every individual, it is important for intrinsic and extrinsic motivational factors to be compatible with one another (Bakan & Büyükbeşe, 2004). For this reason, the goals of participating in sports may differ between adolescents and adults. Enjoyment of play and learning is considered important for younger individuals, whereas regular exercise and sports participation are emphasized more strongly in adulthood (Scanlan et al., 1989). While intrinsic motivation plays a significant role in sports participation, sports engagement, and continuity, extrinsic motivation is generally regarded as one of the primary driving forces directing individuals toward sports participation (Yılmaz, 2002).

Although participation in sports may vary according to personality traits, one of the primary motivations is the opportunity to establish a social environment (Downward & Riordan, 2007). Individuals participate in sports activities for various reasons such as physical development, striving for novelty, gaining experience, self-exploration, personal growth, creativity, social integration, satisfying competitive instincts, and maintaining health (Özdilek et al., 2007). The concept of engagement is believed to have a significant influence on individuals' emotions, behaviors, and attitudes while performing activities (Tutar, 2016). Stable and long-term experiences within the sports environment are expressed through the concept of sports engagement. This concept also includes feelings such as enjoyment,

confidence, effort, and energy. Athletes with sports engagement are described as individuals who demonstrate positive long-term cognitive and emotional sports experiences accompanied by characteristics such as self-confidence, dedication, and vigor (Lonsdale et al., 2007).

Scanlan et al. (1993a, 1993b), Carpenter et al. (1993), Carpenter & Coleman (1998), and Carpenter and Scanlan (1998) began to examine the concept of sports commitment during the 1990s. These researchers defined sports commitment as a motivational force reflecting an individual's desire and determination to continue participating in sports. They also described sports commitment as a dynamic psychological state that may change over time, across seasons, and throughout athletic careers.

Personality is one of the concepts on which psychologists have not reached a complete consensus. Despite the existence of many different definitions, personality is generally described as the relatively stable and unique patterns of behavior specific to an individual (Morgan, 2011; Tiryaki, 2000). One of the most important characteristics of personality is consistency. In this context, personality traits do not continuously or rapidly change over time. As personality develops, more consistent behavioral characteristics begin to emerge (Cüceloğlu, 1991).

According to Doğan (2004), personality is a unique characteristic that distinguishes individuals from one another through the harmonious integration of the traits that constitute the individual. Personality traits influence how interpersonal relationships are established, while interpersonal experiences during developmental stages also shape personality traits. Every stage of development contributes, to some extent, to the development of personality. However, once a stable and consistent character structure is formed, personality traits tend to remain stable or change very little. Genetic, structural, cognitive, environmental, and cultural factors are considered influential in the development of personality traits.

Individuals' initiation, continuation, and development of sport engagement cannot be explained solely by physical characteristics or performance. These processes may be influenced by several factors, including individuals' motivation, social environment, sporting experiences, and personality traits. Personality traits are considered relatively stable characteristics that influence individuals' ways of thinking, behavior patterns, and interpersonal relationships, whereas sport engagement is regarded as a dynamic process that may change over time and be shaped by sporting experiences. Therefore, examining the relationship between personality traits and sport engagement may contribute to a better understanding of individuals' persistence in sport and their level of sport engagement.

Accordingly, this study aimed to examine the relationship between the personality traits and sport engagement levels of active athletes and to determine the predictive role of personality traits on sport engagement. The hypotheses of the study are presented below.

H1: There is a significant relationship between the personality traits and sport engagement levels of active athletes.

H2: Personality traits significantly predict the sport engagement levels of active athletes.

METHODS

Research Design

In this study, the relational survey model, which is one of the quantitative research methods, was employed (Karasar, 2009).

Participants

The study was conducted with licensed athletes who were studying at the Faculty of Sport Sciences at Balıkesir University and actively participating in sports. The population of the study consisted of students enrolled at the Faculty of Sport Sciences, Balıkesir University, while the sample consisted of 305 licensed athletes actively participating in a sports branch. The data were collected using the purposive sampling method. According to Sekaran (2003), a sample size of 278 is sufficient for populations larger than one thousand. Accordingly, the sample size of 305 participants in the present study was considered adequate. The inclusion criteria for participation were being actively involved in any sports branch and completing the data collection instruments in full. Since the study was conducted only with students from the Faculty of Sport Sciences at Balıkesir University, the generalizability of the findings to students from other universities, different age groups, or other athlete populations is limited.

Table 1. Demographic Characteristics of the Participants

Variables	Category	n	%
Gender	Male	184	60.3
	Female	121	39.7
Age	18-21 years	192	63.0
	22 years and above	113	37.0
Sports Branch	Individual	144	47.2
	Team	161	52.8
Exercise Frequency	1 day	44	14.4
	2-3 days	120	39.3
	4-5 days	108	35.4
	6-7 days	33	10.8
Sport Experience (Years)	1-3 years	86	28.2
	4-6 years	77	25.2
	7-9 years	69	22.6
	10 years and above	73	23.9
Total		***305***	***100***

When the descriptive statistics of the participants were examined, 60.3% were male and 39.7% were female. In terms of age distribution, 63% of the participants were between the ages of 18–21, while 37% were aged 22 years and above. Regarding sports branches, 47.2% of the participants were involved in individual sports and 52.8% participated in team sports. Examination of exercise frequency revealed that 14.4% exercised 1 day per week, 39.3% exercised 2–3 days per week, 35.4% exercised 4–5 days per week, and 10.8% exercised 6–7 days per week. In addition, 28.2% of the participants had a sports history of 1–3 years, 25.2% had 4–6 years, 22.6% had 7–9 years, and 23.9% had been involved in sports for 10 years or more.

Data Collection Methods and Tools

In the study, the "Demographic Information Form," "Sport Engagement Scale," and "Big Five Personality Scale" were used as data collection tools.

Personal Information Form: A demographic information form including variables such as gender, age, sports branch, exercise frequency, and sports history was used in the study.

Sport Engagement Scale (SES): In order to determine athletes' levels of sports engagement, the Sports Engagement Scale was used. The scale was developed through the adaptation of the Spanish version of The Utrecht Work Engagement Scale (UWES), originally developed by Schaufeli & Bakker (2004), into the sports context by Guillen & Martinez-Alvarado (2014). The Turkish adaptation of the scale was carried out by Sırgancı, Ilgar & Cihan (2019). The scale consists of three sub-dimensions. The first sub-dimension, vigor, includes items 1, 2, 6, 7, and 8; the second sub-dimension, dedication, includes items 3, 4, 5, 9, and 12; and the third sub-dimension, absorbation, includes items 10, 11, 13, 14, and 15. The scale consists of a total of 15 items and does not contain any reverse-coded items. The validity of the 15-item single-factor structure of the scale was confirmed in both models. The fit indices were CFI = 0.96, TLI = 0.95, and IFI = 0.96 for both models, whereas the RMSEA values were 0.06 for the single-factor model and 0.05 for the three-factor model.

Big Five Personality Scale: The scale was originally developed by Rammstedt & John (2007) to evaluate individuals' personality traits and was adapted into Turkish by Horzum, Ayas & Padır (2017). The scale consists of 10 items and five different sub-dimensions and is evaluated using a five-point Likert-type format. The first sub-dimension of the Big Five Personality Scale, extraversion, consists of items 1 and 6; the second sub-dimension, agreeableness, consists of items 2 and 7; the third sub-dimension, conscientiousness, consists

of items 3 and 8; the fourth sub-dimension, neuroticism, consists of items 4 and 9; and the fifth sub-dimension, openness to experience, consists of items 5 and 10. Exploratory factor analysis (EFA) confirmed the five-factor structure of the scale. The total variance explained by the factors was 19.4% for Extraversion, 15.0% for Agreeableness, 18.4% for Conscientiousness, 4.7% for Neuroticism, and 30.9% for Openness to Experience. Factor loadings ranged from .855 to .913 for Extraversion, .706 to .875 for Agreeableness, .945 to .946 for Conscientiousness, .747 to .863 for Neuroticism, and .874 to .889 for Openness to Experience. Confirmatory factor analysis (CFA) indicated that the model demonstrated acceptable fit ($\chi^2 = 46.139$, df = 25, $p < .001$; RMSEA = .062, GFI = .96, AGFI = .91, CFI = .98, NFI = .97, and SRMR = .035). In the present study, the Cronbach's alpha coefficients were found to be 0.71 for Extraversion, 0.73 for Agreeableness, 0.77 for Conscientiousness, 0.70 for Neuroticism, and 0.74 for Openness to Experience, indicating acceptable internal consistency.

Data Analysis

The study was conducted with the approval of the Social and Human Sciences Ethics Committee of Balıkesir University (Approval No. 48140015/100/374138, dated 19 April 2024). The research data were collected through both face-to-face and online methods on a voluntary basis. Before the data collection process, the participants were informed about the purpose of the study, and informed consent was obtained from all participants. The collected data were used only for scientific purposes, and the confidentiality of the participants' personal information was ensured. Before the statistical analyses, the dataset was checked for missing data, and questionnaires that were not completed in full were excluded from the study.

The data obtained through face-to-face questionnaires and online surveys were analyzed using the SPSS 27 statistical software. Before the analyses, skewness and kurtosis values were examined, and normality tests were performed. According to Tabachnick et al. (2007), values between ±1.5 were accepted as meeting the assumption of normality. Parametric tests were applied to the data that met the assumption of normality. Pearson correlation analysis was performed to determine the relationships between the variables. Linear regression analysis was conducted to determine the predictive effect of the variables that showed significant relationships. According to Köklü et al. (2007), correlation coefficients below 0.30 indicate a weak relationship, coefficients between 0.30 and 0.70 indicate a moderate relationship, and coefficients above 0.70 indicate a strong relationship.

RESULTS

Table 2. Skewness and Kurtosis Values of the Sub-Dimensions of the Big Five Personality Scale and the Sport Engagement Scale

Variables	Skewness	Kurtosis
Sport Engagement Scale	-0.50	-0.46
Extraversion	-0.79	0.26
Agreeableness	-0.72	0.37
Conscientiousness	-0.65	-0.13
Neuroticism	0.14	-0.36
Openness to Experience	0.12	0.28

As presented in Table 2, the skewness and kurtosis values of the total score of the Sport Engagement Scale and the sub-dimensions of the Big Five Personality Scale were within the acceptable range of ±1.5 (Tabachnick et al., 2007). Therefore, the distribution of the variables was considered to meet the assumption of normality, and parametric analyses (Pearson correlation and linear regression) were performed.

Table 3. Mean Scores of the Sub-Dimensions of the Big Five Personality Scale and the Sport Engagement Scale

Variables	$\bar{X} \pm Sd$
Sport Engagement Scale	60.95±8.24
Extraversion	8.00±1.88
Agreeableness	8.03±1.63
Conscientiousness	8.22±1.59
Neuroticism	5.86±1.80
Openness to Experience	7.34±1.55

As shown in Table 3, the mean score of the Sports Engagement Scale was 60.95. The mean scores of the sub-dimensions of the Big Five Personality Scale were found to be 8.00 for extraversion, 8.03 for agreeableness, 8.22 for conscientiousness, 5.86 for neuroticism, and 7.34 for openness to experience.

Table 4. The Relationship Between the Dimensions of the Big Five Personality Scale and the Total Score of the Sport Engagement Scale

	Pearson Correlation (r)					
Variables	**1**	**2**	**3**	**4**	**5**	**6**
1. Sport Engagement Scale	1.00					
2. Extraversion	0.16**	1.00				
3. Agreeableness	0.14**	0.02	1.00			
4. Conscientiousness	0.21**	0.29**	0.08	1.00		
5. Neuroticism	-0.07	-0.08	-0.17**	-0.16**	1.00	
6. Openness to Experience	0.15**	0.20**	0.03	0.22**	-0.13**	1.00

**p<0.05

According to the results presented in Table 4, weak but significant positive relationships were found between sports engagement and extraversion (r=0.16), conscientiousness (r=0.21), agreeableness (r=0.14), and openness to experience (r=0.15). In contrast, no significant relationship was found between neuroticism (r=-0.07) and sports engagement.

Table 5. Regression Analysis Regarding the Prediction of Sport Engagement Levels by Personality Trait Levels

	B	Standard Error (B)	β	t	p
Sabit	47.04	3.16		14.89	**0.00****
Extraversion	0.40	0.26	0.09	1.56	0.12
Conscientiousness	0.83	0.31	0.16	2.71	**0.01****
Agreeableness	0.64	0.28	0.13	2.28	**0.02****
Openness to Experience	0.52	0.31	0.10	1.70	0.09
R=0,28 R^2=0,07					
F=6.41 p<0,001*					

Table 5 presents the predictive effects of the Big Five personality traits, including extraversion, conscientiousness, agreeableness, and openness to experience, on sports engagement. According to the findings, personality traits explained 7% of the variance in sports engagement. When the sub-dimensions were examined, conscientiousness was found to be a positive and significant predictor of sports engagement (β=0.16, t=2.71, p<0.01). Similarly, agreeableness was also identified as a positive and significant predictor of sports engagement (β=0.13, t=2.28, p<0.02). On the other hand, extraversion (β=0.09, p>0.05) and openness to experience (β=0.10, p>0.05) did not have a significant effect on sports engagement.

DISCUSSION and CONCLUSION

In this study, the relationship between personality traits and sports engagement levels of active athletes was examined, and the findings revealed that personality traits had a limited but significant effect on sports engagement. According to the correlation analysis, positive but weak significant relationships were found between sports engagement and extraversion, conscientiousness, agreeableness, and openness to experience, whereas no significant relationship was found between neuroticism and sports engagement. The results of the regression analysis indicated that personality traits explained sports engagement at a low level, with conscientiousness and agreeableness emerging as significant predictors of sports engagement. In contrast, extraversion and openness to experience were not found to be significant predictors.

The finding that personality traits explained sports engagement at a low level suggests that sports engagement is a multidimensional construct that cannot be explained solely by individual characteristics. Kelecek & Göktürk (2017) define athlete engagement as a set of positive cognitive and emotional experiences within the sports environment, including elements such as belief, effort, energy, and enjoyment. Athletes with higher motivation are also reported to demonstrate stronger engagement by maintaining training habits and continuing participation in sports. In team sports, feelings of belonging toward teammates and clubs may also influence athletes' motivation levels. Similarly, Kusan et al. (2024) reported that sports engagement is associated with variables such as psychological needs, achievement status, and motivation. Taken together, these findings suggest that the limited explanatory role of personality traits in the present study may be expected, as sports engagement appears to be influenced not only by personality traits but also by motivational and psychosocial factors. Accordingly, although personality traits were found to be significant predictors of sport engagement, the low explained variance indicates that a substantial proportion of sport engagement is explained by factors that were not included in the present model. Variables such as motivation, years of sports participation, type of sport, training frequency, and other psychosocial factors may also contribute to athletes' sport engagement. Therefore, personality traits should be considered as only one component of a broader set of factors associated with sport engagement. On the other hand, Hristova & Teneva (2025) emphasized that sports environments are not merely settings for physical activity, but also multidimensional contexts in which social interaction, cooperation, discipline, and interpersonal relationships develop. Likewise, Li et al. (2024) and Wu et al. (2024) stated that modern sports environments have become more inclusive, psychologically supportive, and secure. Such environments may positively influence individuals' motivation and levels of sports engagement. Therefore, the low explanatory effect of personality traits on sports engagement in the present study may also be associated with environmental factors, social support mechanisms, and experiences within the sports environment.

In the present study, conscientiousness was found to be a significant predictor of sports engagement. Individuals with high levels of conscientiousness are generally characterized by planned, organized, and responsible behaviors, which may facilitate adaptation to the sports environment. Somer et al. (2002) associated the conscientiousness factor with characteristics such as orderliness, adherence to rules, responsibility, and planned behavior. Similarly, individuals with high levels of empathy are described as organized, goal-

oriented, determined, cautious, and responsible (Zekioğlu & Tatar, 2006). Furthermore, the conscientiousness dimension has been described as reflecting disciplined, responsible, hardworking individuals with strong self-discipline skills (Bitlisli et al., 2013; Tabak et al., 2010; Tatlılıoğlu, 2013). In addition, it has been suggested that the relationship between personality traits and athletic success should be evaluated together with motivational and behavioral processes (Baretta et al., 2017). Steca et al. (2018) also reported that more successful athletes demonstrated higher levels of conscientiousness. Individuals with higher levels of conscientiousness may be more likely to display planned behaviors, take responsibility, and act in a goal-oriented manner, which may support continuity within the sports environment. This finding is consistent with the present study, in which conscientiousness was identified as a significant predictor of sports engagement. Therefore, athletes with higher conscientiousness levels may demonstrate greater persistence and continuity in sports participation. In addition, Weinberg & Gould (2014) emphasized that motivation should be evaluated not only through individual characteristics but also through the interaction of personal and situational factors. This perspective is consistent with the present finding that personality traits explained sports engagement only to a limited extent.

Agreeableness was also identified as a significant predictor of sports engagement in the present study. Individuals high in agreeableness are thought to display more cooperative, understanding, and harmonious interpersonal behaviors, which may positively affect social relationships within sports settings. Similarly, Zhang et al. (2024) reported that individuals with higher levels of agreeableness demonstrated stronger sports commitment. Tian & Shao (2024) further noted that athletes with this personality characteristic tend to be more trustworthy and cooperative teammates. Considering the importance of cooperation and collective action in team sports, such characteristics may facilitate adaptation to team environments. In addition, agreeable individuals may positively influence team morale and productivity (Hou, 2024). Shahzad et al. (2023) also suggested that agreeableness may support team cohesion and interpersonal harmony. The relationship between personality traits and athletic success has been described as highly complex, involving a range of motivational and dispositional variables related to sports performance and achievement (Baretta et al. 2017). In this regard, Steca et al. (2018) reported that more successful athletes scored higher than non-athletes on all Big Five personality dimensions except openness to experience, whereas less successful athletes scored higher than non-athletes only in extraversion and agreeableness. The same study also indicated that more successful athletes demonstrated

higher levels of agreeableness, conscientiousness, and emotional stability compared with less successful athletes (Steca et al., 2018). These findings suggest that agreeableness may not only be associated with social harmony and interpersonal relationships within sports settings, but may also contribute to adaptation to the sports environment, continuity in sports participation, and the development of positive athletic experiences. Furthermore, some studies have shown that athletes participating in individual sports exhibit higher levels of conscientiousness, openness to experience, and emotional stability, whereas team sport athletes tend to display higher levels of extraversion (Allen et al., 2011; Eagleton et al., 2007). This finding suggests that personality traits should be evaluated not independently, but together with the structural and social characteristics of different sports settings. Accordingly, the finding that agreeableness significantly predicted sports engagement in the present study may be associated with positive social relationships and a sense of belonging developed within the sports environment.

Although significant positive relationships were found between sports engagement and both extraversion and openness to experience, these variables were not identified as significant predictors of sports engagement. Previous studies have reported that athletes may display higher levels of extraversion (Egloff & Gruhn, 1996; Paunonen, 2003) and openness to experience (Hughes et al., 2003; Kajtna et al., 2004) compared with non-athletes. This may indicate that sports environments are not limited to physical performance alone, but are also associated with social interaction, openness to new experiences, and adaptation to novel situations. Personality traits may also be related to the type of sport preferred. Athletes engaged in individual sports have been reported to exhibit higher openness to experience, whereas team sport athletes tend to demonstrate higher levels of extraversion (Allen et al., 2011; Eagleton et al., 2007; Steca et al., 2018). This finding suggests that the structural characteristics of sports environments may interact with personality traits and that different sports experiences may be associated with different personality tendencies. Allen et al. (2013) further suggested that individuals tend to participate in activities that are compatible with their personality characteristics. The same study noted that sports environments requiring intense communication and social interaction may be more suitable for extraverted individuals, while participation in sports may also contribute to the development of certain personality traits over time. In this respect, extraversion may facilitate participation in sports and social interaction, whereas openness to experience may encourage individuals to engage in diverse sporting experiences. However, the fact that extraversion and openness to experience were not

significant predictors of sports engagement in the present study suggests that these traits may influence sports engagement indirectly by facilitating participation in sports environments rather than directly determining engagement itself. This finding also supports the view that sports engagement is a multidimensional construct shaped not only by personality traits, but also by motivation, social interaction, sports experiences, and environmental factors.

No significant relationship was found between neuroticism and sports engagement in the present study. In the literature, neuroticism has generally been associated with anxiety, stress, and emotional reactions in sports processes. Kemarat et al. (2022) reported that neuroticism had a low-level effect on competitive anxiety, whereas Binboğa et al. (2012) suggested that neuroticism could predict changes in psychophysiological parameters among young taekwondo athletes. The same study described neuroticism as a tendency to experience negative emotions such as anger, anxiety, and depression and suggested that it may be associated with anxiety in athletes exposed to intense psychological pressure (Kemarat et al., 2022). In addition, within personality theory, neuroticism has been linked to low tolerance for stress and environmental stimuli, and individuals with high levels of neuroticism are considered more emotionally reactive and vulnerable to stress (Eysenck, 1967; Mitchell et al., 2016). Taken together with the present findings, neuroticism may be more closely associated with emotional burden, anxiety, and stress experienced during sports processes rather than with sports engagement itself. In other words, individuals with higher levels of neuroticism may respond more sensitively to psychological pressure experienced during sports participation rather than to the continuity of sports involvement. This may help explain the absence of a significant relationship between neuroticism and sports engagement in the present study. Similarly, Li et al. (2024) reported that although Big Five personality traits significantly predicted athletic behaviors, neuroticism was not found to be significant. Zhang et al. (2024) also stated that personality traits did not have a direct significant effect on exercise behavior, whereas sports engagement could act as a mediating variable. Accordingly, the absence of a significant relationship between neuroticism and sports engagement in the present study suggests that sports engagement cannot be explained solely through individuals' emotional tendencies and may also be shaped by motivation, sports experiences, and characteristics of the sports environment.

In conclusion, this study examined the relationship between personality traits and sport engagement levels among active athletes and found that personality traits had a limited but significant effect on sport engagement. The findings revealed positive relationships between

extraversion, conscientiousness, agreeableness, openness to experience, and sport engagement, whereas no significant relationship was found between neuroticism and sport engagement. The results of the regression analysis indicated that conscientiousness and agreeableness were significant predictors of sport engagement, whereas extraversion and openness to experience did not directly predict sport engagement. These findings suggest that sport engagement cannot be explained solely by individual personality traits but should be considered a multidimensional construct influenced by various factors, including motivation, social interaction, the sporting environment, sporting experiences, and psychosocial processes. Based on the findings of this study, it is recommended that individual personality traits be taken into consideration in practices aimed at enhancing athletes' sport engagement. Considering that conscientiousness and agreeableness may play a more important role in maintaining participation and engagement to sport, coaches, sport psychologists, and sport educators may develop strategies to support these personality characteristics. Furthermore, future studies should examine sport engagement among athletes from different age groups, sport branches, and performance levels, as well as in relation to psychosocial variables such as motivation, psychological resilience, self-efficacy, and athletic identity. In addition, longitudinal and experimental research designs may contribute to a more comprehensive understanding of the relationship between personality traits and sport engagement.

Limitations

Since this study employed a correlational research design, the relationships between personality traits and sport engagement should not be interpreted as causal. Furthermore, because this study was conducted only with licensed athletes studying at the Faculty of Sport Sciences, Balıkesir University, the generalizability of the findings to students from other universities, different age groups, and other athlete populations is limited. In addition, personality traits and sport engagement were assessed using self-report measures. Therefore, the findings may have been influenced by participants' social desirability tendencies and self-report bias. In addition, only personality traits were included in the regression model. Other variables that may influence sport engagement, such as motivation, years of sports participation, type of sport, and training frequency, were not examined. Including these variables in future studies may provide a more comprehensive understanding of the factors associated with sport engagement.

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